

## PSYCHIATRY

**Weather Neglected by Psychoanalysts, Too**

► THE WEATHER, that favorite topic of conversation for everyone, has apparently been neglected by psychoanalysts.

By failing to study the meaning of what the patient says about the weather, psychoanalysts have overlooked "valuable opportunities" for learning more about the patient's nature and difficulties, Dr. Philip Solomon of Boston charged at the meeting of the American Psychoanalytic Association in Boston.

"Everybody talks about the weather, but nobody does anything about it in psychoanalysis," Dr. Solomon said. "Perhaps analysts have too readily assumed that patients who talk of the weather are demonstrating resistance."

Dr. Solomon studied associations to the weather given by patients in both Los Angeles and Boston. He noted specifically whether they had good or bad associations with rain, wind, temperature, snow, clouds, sunshine and so on.

Some seemed to look on weather as an exhibition of "Mother Nature" and with a feeling as if parents had something to do with it. In such cases, there was an unpleasant association to the weather.

Others reacted to the weather as a projection of their own state of feelings. This corresponded to pleasant associations.

Grown-ups, but not children, cry at a happy ending to a story or to their own troubles because they realize that the final ending, death, means separation from loved ones. This psychoanalytic finding and its explanation was reported by Dr. Sandor Feldman of Rochester, N. Y.

Science News Letter, December 11, 1954

## MEDICINE

**Tri-Metal Medicine Aids Undulant Fever Recovery**

► SWALLOWING DOSES of a three-metal solution helped the recovery of seven patients with chronic pulmonary undulant fever, Dr. Alvis E. Greer of Houston, Tex., reported at the meeting of the American Medical Association in Miami, Fla.

The metals are cobalt, copper and manganese.

Exactly how the treatment works is not known completely. Dr. Greer said it is his purpose "to only suggest its further trial by other observers."

Two other patients have shown improvement with this treatment.

Undulant fever is also known as brucellosis. It is marked by remittent or intermittent undulatory fever, neck pain, headache, sweating, constipation, weakness and anemia. Man acquires the disease by drinking infected milk or by contact with infective material.

"There is a general impression," Dr. Greer said, "that the disease occurs only in

cattle, swine, and goats, although other domesticated animals, such as sheep, horses, and even poultry may suffer with brucellosis.

"Wild animals known to be susceptible are rabbits, deer, moose, elk, buffalo, and dogs."

Dr. Greer reported that farmers and ranchers suffered from the disease more than any other occupational group, with 36 of 59 cases in this group.

"Fourteen of my 18 cases were directly connected with cattle and 12 of the 18 cases were women. The other occupations included one salesman, one drug clerk, one oil field worker and one school teacher."

Science News Letter, December 11, 1954

## ENGINEERING

**Fuel May Be Used to Cool Rockets of Future**

► ROCKET FUEL may be used as a coolant to prevent rocket planes of the future from melting at high speeds. Or perhaps the planes will have to be partially rebuilt after each flight lasting more than a few minutes.

These two schemes were offered by scientists at a meeting of the American Society of Mechanical Engineers in New York as solutions to the problem of the "thermal barrier," which at present limits the speed of jet planes.

When projectiles reach a speed five or six times that of sound, such intense heat is generated that aluminum and steel melt.

The scientists agreed that research on thermal barrier problems has lagged far behind the capabilities of aircraft designers, but they sharply disagreed on whether the limit of aircraft speed is in sight.

The points were raised in papers delivered by Charles H. McLellen of the National Advisory Committee for Aeronautics, Harold W. Adams of Douglas Aircraft, and F. R. Steinbacher and Louis Young of Lockheed Aircraft Co.

Science News Letter, December 11, 1954

## MEDICINE

**Dextran With Iron Helps Build Blood Hemoglobin**

► DEXTRAN, PERHAPS best known as a blood plasma expander, can help the body build hemoglobin for redder blood in anemic persons.

It does this when combined with iron. The combination makes it possible for the doctor to give "shots" of iron into the muscles in anemic patients who cannot take iron by mouth.

Good results with this dextran-iron combination, supplied under the British trade name Imferon, are reported by Drs. D. F. Cappell, H. E. Hutchison, E. B. Hendry, Hugh Conway, J. M. Scott and A. D. Telford Govan of Glasgow, Scotland, in the *British Medical Journal* (Nov. 27).

Science News Letter, December 11, 1954

**IN SCIENCE**

## PSYCHOLOGY

**May Be Getting Too "Gladiator Minded"**

► AMERICANS MAY be becoming too "gladiator minded," Dr. Frank Tallman, psychiatrist at the University of California at Los Angeles, charges.

Our biggest participation in group activity is in the role of spectators at football, baseball and basketball games, or boxing and wrestling matches. If we are unwilling to attend the games in person, we follow them on our television sets.

"While interest in sports is in itself all right," Dr. Tallman said, "direct participation in some form of group activity rather than just in the role of an observer would be a much healthier form of recreation.

"More active participation in recreation appropriate to one's age group would be better for easing some of the tension of modern living than sole dependence on spectator sports," he said.

Our children's recreational activity might be improved also, he suggested.

"Perhaps public parks are really too neat for children," he said. "They might be better off with plain dirt on their feet and less grass to keep off."

Science News Letter, December 11, 1954

## PALEONTOLOGY

**"Living Fossil" Insects Found in Death Valley**

► TWO POPULATIONS of rare insects, so-called "living fossils" from the Ice Age, have been discovered in Death Valley.

The discovery was made in a pond near Saratoga Springs by Dr. John Belkin and William McDonald of the University of California at Los Angeles.

One group of insects is evolutionally midway between gnats and true mosquitoes, and is known as *Corethrella laneana*. This species has also been identified in Mexico. However, the Death Valley species is different enough to suggest a distinct subspecies.

The other "living fossil" is a true mosquito. Known as *Uranotaena anhydora*, it is related to a type found in Texas. It is thought to feed on frogs.

Both populations of insects apparently have been isolated in the desert area since the end of the last glacial period.

In the same area Dr. Carl Hubbs of the Scripps Institution of Oceanography found a "living fish fossil." This was the desert pupfish which is thought to have been isolated in the area for 11,000 years since the ice age.

Science News Letter, December 11, 1954

# CE FIELDS

## PHYSICS

### Date Meteorites as 5,000,000,000 Years Old

► METEORITES, THE earth's only imports from outer space, are as old or older than the earth they smash into. They are about 5,000,000,000 years old, with the minimum age of the earth itself about 4,500,000,000 years.

This was determined by Gerald J. Wasserburg of the University of Chicago's Institute for Nuclear Studies and Richard J. Hayden of the Argonne National Laboratory. They reported to the American Physical Society meeting in Chicago that they had dated two meteorites by measuring the ratios of atoms of radioactive potassium 40 to atoms of the inert gas, argon 40, within them.

The new measurements showed that two meteorites solidified 4,860,000,000 and 4,700,000,000 years ago.

The datings strengthen the idea that both meteorites and earth were formed about the same time.

Science News Letter, December 11, 1954

## MEDICINE

### Way to Improve Cancer Treatment in Women

► A WAY to save 25 out of 100 women now doomed to cancer death was reported by Dr. Joe V. Meigs of Vincent Memorial Hospital, Boston, at the meeting of the American Medical Association in Miami, Fla.

The method is a way of picking which women can be helped by X-ray or radium treatment and which can be helped by surgery.

"It has now been shown that cancer of the cervix (neck of the womb) can be treated well by means of surgery or radiation," Dr. Meigs said. "However, even in the early cases, there is a 25% failure in both types of treatment, although the treatment is well given."

Through a study of nearly 300 patients, he and his colleagues have concluded the failures came about because patients with cancers resistant to radiation were getting this treatment instead of surgery, while patients with radiation-sensitive cancers were being treated by surgery. The surgery, he said, fails in the radiation-sensitive cases.

A vaginal smear, painless test that many women now have routinely for cancer detection, makes it possible to determine which patient should get X-ray or radium treatment and which should have surgical operations for best results.

A study of this method is now being conducted at Harvard Medical School and

three Boston area hospitals in addition to Vincent Memorial. The work is being directed by Dr. and Mrs. John B. Graham of Boston in collaboration with Dr. Meigs.

"In a few years the trend of results will be obvious," Dr. Meigs said, "and it is our hope that selection of patients by means of trials with radiation will help partially to solve this problem" of cancer of the cervix.

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## GENERAL SCIENCE

### Senator Asks for More Engineers in Government

► THE U.S. needs more engineers and fewer lawyers in elective office, the *American Society of Mechanical Engineers* meeting in New York was told.

Lawyer-dominated political decisions are not necessarily bad, said New York State Senator Thomas C. Desmond, but they could be changed for the better by more men with previous engineering experience.

In this age of atomic energy and jet craft, he said, the "forward-looking," analytical mind of the engineer is sorely needed in political office. The senator, a retired engineer himself, deplored the fact that, of 56 New York State senators, 33 were lawyers.

"More engineers in such policy-forming positions could have contributed different and, I believe, more constructive points of view toward the decisions reached," he said.

It is high time, he added, "that engineers who have contributed so much to our material advancement should cooperate with other men of good will toward our political advancement."

Science News Letter, December 11, 1954

## DENTISTRY

### Poor Health Goes With Poor Teeth

► THE PERSON who has a lot of ailments that take him frequently to the doctor probably also goes frequently to the dentist because of many cavities in his teeth.

Studies showing this are reported by Lieut. J. H. Manhold, Navy Dental Corps, and Dr. C. E. Izard of the Naval School of Aviation Medicine, Pensacola, Fla., in *Science* (Nov. 26).

About 15% of a group of naval aviation cadets, they found, made five or more visits to the dispensary during an eight-month period. This same 15% of cadets, who could be considered to have the "poorest" health, had a 31.09 DMF (decayed, missing or filled teeth) rating, compared to a 27.22 rating for a representative sample of the overall population of cadets.

The finding, the scientists state, shows that when a person's health is being appraised in general terms, such as good, fair or poor, his dental condition should also be considered.

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## PLANT PATHOLOGY

### Unidentified Disease Attacks Yellow Poplars

► AN UNIDENTIFIED fungus disease is attacking yellow poplar saplings in Mississippi.

The disease was first discovered in 1953 by E. Richard Toole and B. J. Huckenpahler of the U. S. Department of Agriculture's Southern Forest Experiment Station, New Orleans. At that time, it was found in only one small area of the Tallahatchie Experimental Forest near Oxford, Miss. Reports received in 1954, however, indicate that the disease is now killing trees throughout the state.

The fungus disease causes dieback, that is, the branches die from the crown of the tree down. The dieback can either spread rapidly, or slowly, killing 10% to 20% of the crown in one year.

The scientists stated "it is perhaps important that the disease first attracted our attention after several severe drought years had occurred in the area. Possibly the fungus is always present in the forest and has built up to the present situation on trees somewhat weakened by the recent drought cycle."

The yellow poplar, also known as the tulip tree, is one of the major trees utilized by the forestry industry in the United States and has been long known for its relative freedom from damaging disease.

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## PHYSICAL CHEMISTRY

### Tune in on Atoms As Molecules Change

► TAKING ADVANTAGE of the fact that every chemical atom is a spinning magnet, Dr. Richard A. Ogg, Jr., professor of chemistry at Stanford University, uses the responses to radio frequency waves beamed at reacting chemicals to time the reactions.

When first mixed, chemicals change their relationship to each other in a fraction of a second. By the time this difference has appeared throughout the volume of the mixture, the initial change is long past.

However, by making the radio waves visible on a cathode ray tube, or television-like screen, pips and wave forms can show what is happening within the chemical molecule as it happens.

Dr. Ogg uses for this new method of chemical study an application of the principle of nuclear magnetic resonance worked out by Dr. Felix Bloch, formerly of Stanford University and now the first director-general of CERN, the cooperative group formed to allow scientists from 12 European countries to carry out research in nuclear physics because efforts and equipment in any one country were insufficient.

This research won Dr. Bloch the 1952 Nobel prize in physics, shared with Dr. Edward M. Purcell of Harvard University, who worked in a similar field.

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